



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/777,747	02/13/2004	Sebastien Imbourg	248845US6	5314

22850 7590 07/07/2005

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.  
1940 DUKE STREET  
ALEXANDRIA, VA 22314

EXAMINER
----------

NGUYEN, NINH H

ART UNIT	PAPER NUMBER
----------	--------------

3745

DATE MAILED: 07/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/777,747

Applicant(s)

IMBOURG ET AL.

Examiner

Ninh H. Nguyen

Art Unit

3745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7, 8, 10, 11 and 13-15 is/are rejected.
- 7) ☒ Claim(s) 6, 9 and 12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 02/13/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 7-9 are objected to because of the following informalities: in line 2 of each of claims 7 and 8, "high" should be --low-- since Applicant is claiming an annular platform for a nozzle of a low-pressure turbine. Claim 9 is objected to as being dependent on claim 8.

Appropriate correction is required.

2. Claim 15 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to other claims in the alternative only. See MPEP § 608.01(n). Claim 15 is recited to be dependent on both claims 7 and 10. Accordingly, claim 15 has not been further treated on the merits.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-5, 7, 8, 10, 13, 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miraucourt et al. (5,217,347).

Miraucourt discloses a platform 4, 5 for a turbine nozzle (Fig.1) comprising at least one fixed vane 1, the platform 4 comprising a downstream portion supporting the fixed vane radially defining an aerodynamic channel which extends longitudinally between a leading edge of the

Art Unit: 3745

fixed vane and a trailing edge of a moving blade (not shown but known to be present), the platform further comprising an upstream portion extending longitudinally beyond the leading edge of the fixed vane towards the trailing edge of the moving blade;

wherein the upstream portion includes a cooling circuit (see Fig. 1);

wherein the cooling circuit includes at least one cooling cavity 20 extending longitudinally between an upstream end of the platform and the leading edge of the fixed vane;

wherein the cooling circuit further comprises air feed means 14 for feeding the cavity, and air exhaust means for exhausting air from the cavity (see arrows representing airflow);

wherein the air exhaust means of the cavity comprise at least one hole opening out into the cavity and leading to the outside of the platform (see arrows representing airflow upstream and downstream of platform 4); and

wherein the platform 4 constituting a top platform of the turbine nozzle (Fig. 1), and wherein the air feed means 14 comprise at least one orifice opening out into an air manifold for cooling the fixed vane and leading into the cavity (Fig. 1).

However, Miraucourt does not specifically disclose the stator vane nozzle is for a low-pressure turbine nozzle as claimed.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made, to apply the cooling circuit for a turbine nozzle of Miraucourt to a low-pressure turbine nozzle for the purpose of providing a cooling system for a low-pressure turbine nozzle.

Art Unit: 3745

5. Claims 1-5, 7, 10, 11, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yu et al. (6,394,749).

Yu discloses a platform 16, 18 for a turbine nozzle (Figs.1-5) comprising at least one fixed vane 14, the platform 16 comprising a downstream portion supporting the fixed vane radially defining an aerodynamic channel which extends longitudinally from a leading edge of the fixed vane and extending in the upstream direction (Fig. 1), the platform further comprising an upstream portion extending longitudinally beyond the leading edge of the fixed vane towards the upstream direction;

wherein the upstream portion includes a cooling circuit (see Figs. 1, 2);

wherein the cooling circuit includes at least one cooling cavity 42 extending longitudinally between an upstream end of the platform and the leading edge of the fixed vane;

wherein the cooling circuit further comprises air feed means 52 for feeding the cavity, and air exhaust means for exhausting air from the cavity (Fig. 3);

wherein the air exhaust means of the cavity comprise at least one hole opening out into the cavity and leading to the outside of the platform (Fig. 3); and

wherein the platform 16 constituting a bottom platform of the turbine nozzle (Fig. 1), and wherein the air feed means 52 comprise an orifice passing through the platform for exhausting cooling air from the fixed vane (Fig. 3);

However, Yu does not specifically disclose the stator vane nozzle is for a low-pressure turbine nozzle as claimed.

Art Unit: 3745

It would have been obvious to a person having ordinary skill in the art at the time the invention was made, to apply the cooling circuit for a turbine nozzle of Yu to a low-pressure turbine nozzle for the purpose of providing a cooling system for a low-pressure turbine nozzle.

***Allowable Subject Matter***

6. Claims 6, 9, and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and to overcome the claim objections set forth in the "Claim Objections" section of this Office Action.

***Prior Art***

The prior art made of record but not relied upon is considered pertinent to applicant's disclosure and consists of 1 patent.

Landis, Jr. et al. (4,187,054) is cited to show a cooled turbine nozzle platform.

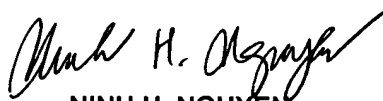
***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Ninh Nguyen whose telephone number is (571) 272-4823. The examiner can be normally reached on Monday-Friday from 7:30 A.M. to 5:00 P.M.

Art Unit: 3745

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Look, can be reached at (571) 272-4820. The fax number for this group is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, please go to <http://pair-direct.uspto.gov> or contact the Electronic Business center (EBC) at 866-217-9197 (toll-free).

  
NINH H. NGUYEN  
PRIMARY EXAMINER

Nhn  
June 29, 2005